PENDING CLAIMS AS AMENDED

Please amend the claims as follows:

1. (Original) In a multiple-access OFDM-CDMA system, a method for processing data for transmission over a wireless communication channel, comprising:

coding a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

spreading the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

transforming the spread data in accordance with a particular transformation to provide a stream of OFDM symbols;

scaling the stream of OFDM symbols in accordance with a particular gain selected for the data stream; and

transmitting the scaled OFDM symbols over the communication channel.

2. (Original) The method of claim 1, further comprising:

appending a cyclic prefix to each OFDM symbol to provide a corresponding transmission symbol, wherein transmission symbols are scaled and transmitted over the communication channel.

3. (Original) The method of claim 1, further comprising:

covering the scaled OFDM symbols with a cover code.

4. (Original) The method of claim 3, wherein the cover code has a length that is multiple integer times a length of the OFDM symbol.

5. (Original) The method of claim 3, wherein the cover code has a length that is multiple integer times a length of a transmission symbol formed by appending a cyclic prefix to an OFDM symbol.

6. (Original) The method of claim 1, wherein the data symbol stream comprises coded bits.

7. (Original) The method of claim 1, wherein the data symbol stream comprises modulation symbols derived based on a particular modulation scheme.

8. (Original) The method of claim 1, further comprising:
transmitting a pilot along with the scaled OFDM symbols over the communication channel.

9. (Original) The method of claim 1, wherein the spreading codes are Walsh codes.

10. (Original) The method of claim 1, wherein the spreading codes are orthogonal codes.

11. (Original) The method of claim 1, wherein the spreading codes are pseudo-orthogonal codes.

12. (Original) The method of claim 1, wherein the transformation is an inverse Fourier transform.

13. (Original) The method of claim 9, wherein the Walsh codes have a length equal to the dimension of the transformation.

14. (Original) The method of claim 1, further comprising:
adjusting the spreading based on a data rate of the data stream.

15. (Original) The method of claim 14, wherein the spreading is adjusted by assigning a plurality of spreading codes to the data stream.

16. (Original) The method of claim 14, wherein the spreading is adjusted by assigning one or more spreading codes of shorter length to the data stream.

17. (Original) The method of claim 14, wherein the spreading is effectively not performed when the data rate of the data stream reaches a particular threshold data rate.

18. (Original) The method of claim 14, further comprising:
scaling transmit power for the data stream based on the data rate.

19. (Original) The method of claim 1, further comprising:
adjusting the gain to adjust transmit power for the data stream.

20. (Original) The method of claim 1, wherein the scaled OFDM symbols are transmitted on a downlink from a base station to a terminal.

21. (Original) The method of claim 1, wherein the scaled OFDM symbols are transmitted on an uplink from a terminal to a base station.

22. (Original) In a multiple-access OFDM-CDMA system, a method for processing data for transmission over a wireless communication channel, comprising:

coding a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

spreading the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

transforming the spread data in accordance with an inverse Fourier transform to provide a stream of OFDM symbols;

appending a cyclic prefix to each OFDM symbol to provide a corresponding transmission symbol;

scaling each transmission symbol in accordance with a particular gain selected for the data stream;

covering scaled transmission symbols with a cover code; and

transmitting the scaled transmission symbols over the communication channel.

Claims 23-34 (Cancelled)

35. (Original) A transmitter unit in a multiple-access OFDM-CDMA system, comprising:

a TX data processor operative to code a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

a frequency-domain spreader operative to receive and spread the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

a transformer operative to transform the spread data in accordance with a particular transformation to provide a stream of OFDM symbols;

a first multiplier operative to scale the stream of OFDM symbols in accordance with a particular gain selected for the data stream; and

a transmitter operative to process the scaled OFDM symbols to provide a modulated signal and to transmit the modulated signal over the communication channel.

36. (Original) The transmitter unit of claim 35, further comprising:

a cyclic prefix insertion element operative to repeat a portion of each OFDM symbol to provide a corresponding transmission symbol.

37. (Original) The transmitter unit of claim 35, further comprising:
a second multiplier operative to cover the scaled OFDM symbols with a cover code.

38. (Original) A base station comprising the transmitter unit of claim 35.

39. (Original) A terminal comprising the transmitter unit of claim 35.

40. (Original) A transmitter apparatus in a multiple-access OFDM-CDMA system, comprising:

means for coding a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

means for spreading the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

means for transforming the spread data in accordance with a particular transformation to provide a stream of OFDM symbols;

means for scaling the stream of OFDM symbols in accordance with a particular gain selected for the data stream;

means for processing the scaled OFDM symbols to provide a modulated signal; and

means for transmitting the modulated signal over the communication channel.

Claims 41-48 (Cancelled)